

REMARKS

The Applicants have carefully studied the outstanding Office Action. The Examiner's indication that claims 26-43 and 46 are allowed is gratefully acknowledged. Claim 44 has been amended. No new matter has been added by this amendment. Entry, reconsideration and allowance of all claims are respectfully requested.

Claim Amendments

Claim 44 has been amended to separately recite a **gas analyzer** and a **capnographic interpreter unit**, the latter analyzing **carbon dioxide waveform shape of at least one breath of the subject** and providing at least one **waveform output parameter characteristic of said waveform shape**. In addition, the claim has been amended to recite that the respiration diagnosis generator provides **a diagnostic determination of the respiratory state of the subject** (emphases added to indicate amendments). Support for these recitations is to be found in the specification on page 18, paragraph 4, lines 3 to 8, and on page 11, paragraph 3, lines 2 to 3.

Response To Claim Rejections - 35 USC § 102

Former claims 44 and 45 stand rejected under 35 USC § 102(b) as being anticipated by US 4,909,259 to Tehrani. The Examiner states that "Tehrani teaches an apparatus comprising a breath receiver in fluid communication with a subject (col. 4, lines 64-69), a capnographic breath analyzer 46 coupled to the breath receiver via line 60 which analyzes at least one breath of the subject for its CO₂ content, and provides at least one output (col. 4, line 64 - col. 6, line 6), and at least one input 11, 50 receiving at least one non-respiratory measurement made on the subject (col. 5, lines 30-59). The respiration diagnosis generator provides an indication of MRR (metabolic rate ratio) of the respiratory clinical state of the

subject based on the at least one non-respiratory measurement. The non-respiratory measurement may be stroke volume, provided to input 50, or a pulse rate or ECG signal, provided at input 11.”

The Applicants respectfully submit that to the best of their understanding, the apparatus shown in Tehrani differs from that recited in amended claim 44 in a number of ways. In the first place, the apparatus described in Tehrani is used for the determination of the metabolic rate ratio (MRR). The MRR is directed towards determining the effect of bodily activity on changes in the metabolic rate of a subject, and not towards a respiratory measurement. The respiratory state of the subject may indeed have some effect on the MRR, along with many other parameters, but it cannot, to the best of the Applicants’ understanding, be stated that a knowledge of the MRR enables **a diagnostic determination of the respiratory state of the subject**, as now recited in amended claim 44.

Furthermore, the apparatus of Tehrani utilizes the patient’s arterial blood CO₂ pressure, and the patient’s arterial blood O₂ pressure for determining the MRR. Tehrani states that the arterial blood CO₂ pressure may be provided by a CO₂ analyzer, while the arterial blood O₂ pressure may be provided by either an O₂ analyzer or by a pulse oximeter. In both of these cases, nowhere does Tehrani show a need for any data other than the **total arterial blood gas partial pressures** of each gas, in order to determine the MRR. This is also evident by the fact that it is suggested in Tehrani that the oxygen partial pressure be determined by a pulse oximetry measurement. From this it may be understood that if such a measurement were available for CO₂, it would be performed for the CO₂ also, rather than having to determine the CO₂ level from the subject’s exhaled breath.

Nowhere in Tehrani is there shown or suggested that any parameter of the shape of the waveform of the subject’s exhaled breath is determined or utilized in calculating the MRR.

Nowhere in Tehrani is there shown or suggested “a **capnographic**

interpreter unit ... [which] analyzes carbon dioxide waveform shape of at least one breath of the subject and provides at least one waveform output parameter characteristic of said waveform shape”(emphases added), as now recited in amended claim 44.

Nowhere in Tehrani is there shown or suggested provision of “**a diagnostic determination of the respiratory state of the subject** based on said at least one waveform output parameter and on said at least one non-respiratory measurement”(emphasis added), as now recited in amended claim 44.

The Applicants therefore respectfully submit that Tehrani neither anticipates nor renders obvious currently amended claim 44. Therefore Applicants respectfully request that the rejection of claim 44 be withdrawn, and claim 44 and dependent claim 45 be allowed.

Prior Art Made Of Record

Applicants acknowledge the Examiner’s citation of U.S. Patent No. 5,103,814 to T. Maher.

Conclusions

The Applicants therefore respectfully submit that all of that the claims define patentable subject matter over the prior art, and are considered to be in condition for allowance. Reconsideration and prompt allowance of this application are therefore respectfully requested.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this amendment, or credit any overpayment to Deposit Account No. 13-4500, Order No. 4026-4002US1. A DUPLICATE COPY OF THIS SHEET IS ATTACHED.

Respectfully submitted,
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